17025 Section	Subject	QM-I Section	IRD QM-II	Guide 34
1	Scope-17025	NA	NA	
1.1	Scope	1.2 Scope	QM-II 1.2 Scope	
1.2	17025 applicability	NA	NA	
1.3	Notes in 17025	none used	QM-II 1.3 Outline of QM-II	
1.4	Purpose of 17025	NA	NA	
1.5	Disclaimer on Safety and Regulatory requirement	2. References	QM-II 2. References	
1.6	Relation of 17025 to 9000 and 9001	NA	NA	
2	Normative References	2. References	QM-II 2. References	
3	Terms and Definitions	3. Definitions	QM-II 3. Definitions	
4	Management Requirements	4. Management Requirements	heading	
4.1	Organization	4.1 The NIST	heading	
4.1.1	Legally responsible organization	4.1.1 Description	QM-I 4.1.1	
4.1.2	commitment to comply with 17025?	1.1 Institutional Commitment to Quality & 4.2.1 NIST Quality Policy	QM-II 4.1.1 & 4.2.1	
4.1.3	Scope of physical locations, on site or away, temporary or mobile	4.1.2 Physical Locations	QM-II 4.1.2	
4.1.4	conflicts of interest from within the organization's diverse activities	4.1.1 Description	QM-I 4.1.1	4.3
4.1.5.a	Staff authority and resources	4.1.3.2 Management responsibilities, authorities, and delegations for STRS	QM-II 4.1.3.2; 4.2.3.2; 4.3.1; 5.2	
4.1.5.b	undue external and internal influences that adversely affect quality	4.1.1 Description	QM-I 4.1.1	
4.1.5.c	policies & procedures for protecting customer's confidential information	4.1.1 Description	QM-I 4.1.1	
4.1.5.d	avoid activities that would compromise confidence, impartiality, etc	4.1.1 Description	QM-II 5.2.3	
4.1.5.e	Organization and Management Structure of the organization; relation to Quality Management, technical operations, support services	4.1.3 Org. Struct. For STRS; Responsibilities and Authorities & 4.2.3 Org. Struct. QS; responsibilities & authorities	QM-II 4.1.1; 4.1.3	
4.1.5.f	responsibility, authority, and interrelationships all staff affecting quality of calibrations	4.1.3 Org. Struct. For STRS; Responsibilities and Authorities & 4.2.3 Org. Struct. QS; responsibilities & authorities	QM-II 4.1.3; 4.2.3	
4.1.5.g	adequate supervision of staff and trainees by person fully familiar with technical aspects of calibration results	4.1.3.2 Responsibilities, authorities, and delegations	QM-II 4.1.3; 4.2.3	
4.1.5.h	technical(?) management must have overall responsibility for operations and resources as needed for quality	4.1.3 Org. Struct. For STRS; Responsibilities and Authorities & 4.2.3 Org. Struct. QS; responsibilities & authorities	QM-II 4.1.3; 4.2.3	
4.1.5.i	Quality Manger with responsibility and authority for ensuring QS implemented and followed: direct access to mgmt at policy and resource level	4.2.3.2 Responsibilities, authorities, and delegations	QM-II 4.2.3.2.3	
4.1.5.j	Deputies for key personnel, personnel have more than one function, it may be impractical to appt. deputy for every function	4.2.3.2 Responsibilities, authorities, and delegations	QM-II 4.2.3.2	

4.2	Quality System	4.2 NIST Quality System for Calibration Services	heading	
4.2.1	establish, implement, and maintain a Quality System; document policies, systems, programs, procedures, and instructions; communicated, understood, available and implemented by all appropriate personnel	1.1 Institutional Commitment to Quality & 4.2.1 NIST Quality Policy	QM-II 4.2	4.2
4.2.2	Define QS policies and objective in a Quality Manual: overall objectives documented in a Quality Policy Statement issued under authority of Chief Executive	4.2.1 NIST Quality Policy & 4.2.2 NIST Quality Objectives	QM-II 4.2.1	4.2
4.2.2.a	Management's commitment to good professional practice and quality service to its customers	1.1 Institutional Commitment to Quality & 4.1.1 Description & 4.2.1 NIST Quality Policy	QM-II 4.2.1	
4.2.2.b	Mgmt's statement of standard of service	1.1 Institutional Commitment to Quality & 4.1.1 Description & 4.2.1 NIST Quality Policy	QM-II 4.2.1	
4.2.2.c	Objectives of Quality System	4.2.2 NIST Quality Objectives	QM-II 4.2.1	
4.2.2.d	requirement that all staff familiarize themselves with quality documentation and implement the policies and procedures in their work	1.1 Institutional Commitment to Quality	QM-II 4.2.1	
4.2.2.e	Mgmt's commitment to comply with 17025	1.1 Institutional Commitment to Quality & 4.2.1 NIST Quality Policy	QM-II 4.2.1	
4.2.3	QM must contain or make reference to the supporting procedures including technical procedures; must include an outline of the structure of the documentation used in QS	1.3 Outline of NIST QM for Calibration Services (Procedures are indicated as required?)	QM-II 4.3.1	
4.2.4	roles and responsibilities of technical mgmt and quality manager including responsibility to ensure compliance with 17025	4.1.3.2 and 4.2.3.2	QM-II 4.2.3	
4.3	Document Control	4.3 Control of Documents, Records, and Data	heading	
4.3.1	Establish and maintain procedures for control of all QS documents	4.3 Control of Documents, Records, and Data	QM-II 4.3	
4.3.2	Document approval and issue	4.3.2 Document Approval and Issue	Heading	
4.3.2.1	All documents must be reviewed and approved by authorized staff prior to issue, document control must include current revision and distribution must be established and readily available	4.3.2 Document Approval & Issue &4.3.3 Document Changes	QM-II 4.3.2; G01; G02	
4.3.2.2.a	Doc. Cntrl. Proceed. Must ensure: a)-availability where they are needed;	4.3.2 Document Approval and Issue	QM-II 4.3.2	
4.3.2.2.b	Doc cntrl must include b)-periodic review for suitability and compliance with requirements;	4.6 Internal Audits and Management Reviews	QM-II 4.6; G02	
4.3.2.2.c	Doc cntrl must ensure that: c)-invalid or obsolete docs are promptly removed from system;	4.3.3 Document Changes	QM-II 4.3.3	
4.3.2.2.d	Doc cntrl must ensure that: d)-obsolete docs if retained must be so marked	4.3.3 Document Changes	QM-II 4.3.3	
4.3.2.3	QS Docs uniquely identified: date of issue and/or revision id; page numbering, total no. of pages or an end mark, and issuing authority(ies)	This information is clear from the format of the QM	G01	

4.3.3	Document changes	4.3.3 Document Changes	Heading	
4.3.3.1	changes reviewed and approved by authority that performed original review; backgd information pertinent to change must be provided	4.3.3 Document Changes	QM-II 4.3.3	
4.3.3.2	where practical altered or new text shall be identified	4.3.3 Document Changes	QM-II 4.3.3	
4.3.3.3	if document control allows amendment of document by hand pending reissue; procedures and authorities need by defined and amendments shall be clearly marked, initialed and dated	NA	NA	
4.3.3.4	Procedures for handling changes in documents maintained in computer systems	4.3.3	QM-II 4.3.4; G01; G02	
4.4	Review of requests, tenders, and contracts i.e. Acceptance of incoming work	4.4.1 Review and Approval of Requests for Calibrations	Heading	
4.4.1	Policies and Procedures for review of requests for calibration must be established	4.4.1 Review and Approval of Requests for Calibrations	QM-II 4.4	
4.4.1.a	Policies and Procedures for review of requests for calibration must be established to ensure that: reqmnts., including methods, are adequately defined, documented, and understood		QM-II 5; Procedures	
4.4.1.b	Policies and Procedures for review of requests for calibration must be established to ensure: NIST org has capability		QM-II 5.4	
4.4.1.c	Policies and Procedures for review of requests for calibration must be established to ensure that the appropriate test or calibration method is selected and meets the client's needs		QM-II 5.4	
4.4.2	Records of reviews, any significant changes and discussions must be maintained		QM-II 4.3.4.2	
4.4.3	Contract review must cover any work subcontracted by lab	NA	NA	
4.4.4	Client must be informed of deviations from contract		G07; G12	
4.4.5	Amendments of the contract must also be reviewed as above; all amendments must be communicated to affected personnel		G07; G12	
4.5	Subcontracting of tests and calibrations	4.2.1 NIST Quality Policy	NA by reference to QM-I	
4.5.1	Subcontracted cal or testing must be places with a competent contractor, e.g. an accredited lab.	NA	NA	4.4
4.5.2	Client must be informed in writing and when appropriate gain approval in writing	NA	NA	4.4
4.5.3	NIST is responsible to the client for the subcontractor's work, unless subcontractor specified by client or regulation	NA	NA	
4.5.4	Lab shall maintain a registry of all subcontractors that it uses including a record of evidence of compliance by the subcontractor to 17025 for the work in question	NA	NA	4.4
4.6	Purchasing of services and supplies	4.4.2 Procuring Products and Services, External Sources & 4.4.3 Interaction with NIST Supporting Divisions	Heading	
4.6.1	estab. Policy and procedures for selection and purchasing of services and supplies that affect the quality of cals. Specific proced. For reception and storage of reagents and lab consumables relevant to cals		QM-II 4.4.2; G03	

4.6.2	ensure that supplies, consumables, etc used in cals are verified to meet specifications or requirements of the cal method. Records of verification shall be kept		G03; Procedures	
4.6.3	Purchasing documents for items affecting quality of work shall contain data describing the services and supplies ordered and shall be reviewed and approved for technical content		G03; Procedures	
4.6.4	suppliers of critical supplies and services shall be evaluated and records maintained of these evaluations and approved suppliers	can we list approved suppliers at the Division level?	G03; Procedures	
4.7	Service to Client: Afford clients cooperation to clarify their requests and monitor performance of work (confidentiality of other clients must be assured)	4.2.2.3	QM-II 4.2.2.5	
4.8	Complaints: Policy and procedure for resolution of complaints; records must be maintained of all complaints, investigations, and corrective actions	4.5.1 Non-conformance & 4.5.2 Customer Complaints	QM-II 4.5.2; G04	
4.9	Control of non-conforming work	4.5.1 Non-conformance	Ref QM-I and Div specific	
4.9.1	Policy and Procedure that shall be implemented when any work does not conform to its own procedures or agreed requirements of client	4.5.1 Non-conformance	QM-II 4.5.1; G07	5.5
4.9.1.a	responsibilities and authorities for management of nonconforming work are designated and actions are defined when nonconforming work is identified	4.5.1 Non-conformance	QM-II 4.5.1; G07	
4.9.1.b	evaluation of significance of nonconforming work is to be made	4.5.1 Non-conformance	QM-II 4.5.1; G07	
4.9.1.c	corrective actions are taken immediately	4.5.1 Non-conformance	QM-II 4.5.1; G07	
4.9.1.d	where necessary client is notified and work recalled	4.5.1 Non-conformance	QM-II 4.5.1; G07	
4.9.2	If evaluation indicates that nonconforming work will re-occur or that it has been happening corrective action per section 4.10 shall be instituted immediately	4.5.1 Non-conformance	G04; G08	
4.10	Corrective action	4.5.1 Non-Conformance	Heading	
4.10.1	Estab. Policy and Procedure and designate authorities to implement corrective actions for nonconforming work	4.5.1 Non-conformance	QM-II 4.5.1; G08	
4.10.2	Procedure for corrective action shall start with a cause analysis	4.5.1 Non-conformance	G08	
4.10.3	If corrective actions are needed, select and implement actions most likely to eliminate the problem and prevent recurrence, Document and implement required changes resulting from corrective action investigations	4.5.1 Non-conformance	G08	
4.10.4	Monitor the results of corrective actions to ensure effectiveness	4.5.1 Non-conformance	G08	
4.10.5	If nonconformances cast doubt on compliance with QS or 17025 an audit in accord with 4.13 shall be initiated as soon as possible	4.5.1 Non-conformance	G08	
4.11	Preventive Action	4.5.3 Preventive Actions	Heading	
4.11.1	Needed improvements and potential sources of nonconformance (tech or QS) shall be identified. If preventive action is reqd. action plans shall be developed, implemented and monitored	4.5.3 Preventive Actions	QM-II 4.5.3; G09	

4.11.2	Procedures for preventive actions shall include initiation of such actions and applications of controls to ensure that they are effective	4.5.3 Preventive Actions	G09	4.6
4.12	Control of Records	4.3 Control of Documents, Records, and Data	Heading	
4.12.1	General Quality and technical records	4.3 Control of Documents, Records, and Data	Heading	
4.12.1.1	Estab and maintain procd. For identification, collection, indexing, access, filing, storage, maintenance, and storage of quality + tech. records. QRs include repts from internal audits and mgmt reviews + records of preventive and corrective actions	4.3 Control of Documents, Records, and Data	QM-II 4.3; Guides	4.6
4.12.1.2	Records are to be legible and stored in such a way as to prevent deterioration. Retention times shall be established	4.3 Control of Documents, Records, and Data	QM-II 4.3.4; Guides	
4.12.1.3	records are to be held secure and in confidence	4.3 Control of Documents, Records, and Data	QM-II 4.3.4.3	5.7
4.12.1.4	procedures to protect, backup and prevent unauthorized access or amendment of records	4.3 Control of Documents, Records, and Data	QM-II 4.3.4.3	4.6; 5.7
4.12.2	Technical Records	4.3 Control of Documents, Records, and Data	Heading	
4.12.2.1	Retain records of original observations, derived data, and sufficient info for audit trail, cal recds, staff recds, copy of each cal/test report or certificate for a DEFINED period. Recds to include (if possible) factors affecting (see comments)	4.3 Control of Documents, Records, and Data	QM-II 4.3.4; Procedures	
4.12.2.2	Observations, data, and calculations shall be recorded at the time they are made and identifiable to the specific task		QM-II 4.3.4.2; G06	
4.12.2.3	Procedures for handling mistakes in records, hard copy and COMPUTER.	4.3 Control of Documents, Records, and Data	QM-II 4.3.4.4; G06	
4.13	Internal Audits	4.6.1 Internal Audits	Heading	
4.13.1	Periodic, predetermined schedule and procedure for audits of all activities and QS to assure compliance with QS and 17025. Responsibility of Quality Manager to organize and plan. Audits done by experts who are independent of activity audited	4.6.1 Internal Audits	QM-II 4.6.1; G10	4.3; 4.4
4.13.2	if corrective action is req'd should be timely and if necessary notify customers	4.5.1 Non-conformance	G10	4.3; 4.4
4.13.3	Audit area, audit findings, and corrective actions shall be recorded	4.6.1 Internal Audits	G10	4.3; 4.4
4.13.4	follow up audit activities shall verify and record the implementation and effectiveness of the corrective action	4.6.1 Internal Audits	G10	4.3; 4.4
4.14	Management Reviews	4.6.2 Management Reviews	Heading	
4.14.1	Executive Mgmt periodically, predetermined schedule and procedure, reviews QS and test/cal activities to ensure suitability and effectiveness and to introduce needed changes and improvements. Reviews shall examine: (see Comments)	4.6.2 Management Reviews	QM-I 4.6.2; QM-II 4.6.2; G10	4.3; 4.4
4.14.2	Findings from reviews and actions shall be recorded. Actions are to be taken on appropriate time scale	4.6.2 Management Reviews	QM-I 4.6.2; QM-II 4.6.2; G10	4.3; 4.4

5	Technical Requirements	5. Technical Requirements	Heading	
5.1.1	List of 7 factors affecting calibrations and the sections that address them i.e. 5.2 thru 5.8	NA	QM-II 5.1	
5.1.2	These 7 factors are to be considered when developing cal methods and procedures., in training and qualifying personnel, in selection and calibration of equipment used in procedure.	NA	Procedures	
5.2	Personnel	5.2 Personnel	Heading	
5.2.1	Management is to ensure competence of all staff who perform cals, evaluate results, and sign cal repts. Trainees must be supervised. Personnel qualified by education, training, experience or demonstrated skills	5.2.1 Competence	QM-II 5.2; 5.2.1; 4.1.3.2	
5.2.2	Goals for education and training for required and anticipated lab skills. Policy and proced. For identifying and providing training as needed	5.2.2 Education and Training Goals	QM-II 5.2.2	
5.2.3	contracted personnel, tech or support, adequately supervised, competent and comply with QS		QM-II 5.2.1	
5.2.4	maintain current job descriptions	4.1.3.2 Mgmt respons, authorities, delegations…	QM-II 4.1.3.2	
5.2.5	Specific personnel authorized for cal activities; maintain records of these authorization, competence, training, skills, and experience; include date authoirzation and/or competence confirmed. INCLUDES contractors		QM-II 4.2.3.2; 4.2.3.2.4	
5.3	Accommodation and Lab environ.	5.3 Accommodations and Environmental Conditions	Heading	
5.3.1	Laboratory facilities shall have conditions which facilitate correct performance.	5.3 Accommodations and Environmental Conditions	QM-II 5.3; Procedures	4.1
5.3.2	Monitor, control, and record lab environment conditions req'd by or which influence quality of cal. Stop if conditions jeopardize the results		QM-II 5.3; Procedures	4.1
5.3.3	Separation of areas having incompatible activities		QM-II 5.3; Procedures	
5.3.4	Controlled access to labs		QM-II 5.3; Procedures	
5.3.5	Good housekeeping		QM-II 5.3; Procedures	4.1
5.4	Test and Calibration methods and method validation	5.4 Test and Calibration Procedures and Procedure Validation	Heading	
5.4.1	Lab shall use appropriate method and procedures for all cals including handling of items to be tested and where appropriate estimation of measurement uncertainty as well as statistical tech for analysis of cal data		Procedures; Guides	5.1
5.4.2	Selection of methods: suitable to cal and customer requirements	5.4.1 Calibrations and Special Tests	Procedures	5.4
5.4.3	Lab developed methods, planned, assigned to qualified personnel, update of plans and good communication		Procedures	5.4
5.4.4	Use of non-standard methods	5.4.1 Calibrations and Special Tests	Procedures	5.4
5.4.5	Validation of methods	5.4.1 Calibrations and Special Tests	Heading	
5.4.5.1	Definition of validation		QM-II 5.9	

5.4.5.2	Lab shall validate NON-STANDARD method and record such validation including method and statement of it being fit for intended (customer) need	5.4.1 Calibrations and Special Tests	QM-II 5.9	5.4
5.4.5.3	Validated methods must meet all customer's needs		QM-II 5.9	5.4
5.4.6	Estimation of Uncertainty of Measurement	5.4.2 Estimation of Uncertainty	Heading	
5.4.6.1	Have and apply a procedure for estimating uncertainty of CALS		QM-II 5.4.3	
5.4.6.2	Uncertainty estimation for Testing Lab	NA	NA	
5.4.6.3	Estimates of uncertainty must include all uncertainty components and proper analysis		QM-II 5.4.3	
5.4.7	Control of data	4.3 Control of Documents, Records, and Data	Heading	
5.4.7.1	Calculations and data transfers shall have appropriate and systematic checks		Procedures	
5.4.7.2.a	When computers and automate equip are used: software must be documented and validated		Procedures	
5.4.7.2.b	have and implement procedures for protecting data to ensure integrity and confidentiality	4.3 Control of Documents, Records, and Data	Procedures	
5.4.7.2.c	Proper care and environment for computers and automated equip		Procedures	
5.5	Equipment	5.5 Equipment	Heading	
5.5.1	Lab shall be furnished with the required equipment. If it uses equipment which is outside of its permanent control it shall ensure that the reqmnts. of 17025 are met		QM-II 5.5; Procedures	5.5
5.5.2	Equipment and its software shall be suitable for intended use and subject to a calibration program to assure its fitness for use		QM-II 5.5; Procedures	5.5
5.5.3	Equipment operated by authorized personnel; manuals and instructions up to date and available to appropriate personnel		QM-II 5.5; Procedures	5.5
5.5.4	Unique identification of equipment and its software, where possible		QM-II 5.5; Procedures	5.5
5.5.5.a	Records: identity of equipment and its software		QM-II 5.5; Procedures	
5.5.5.b	records: mfgs name, serial no etc.		QM-II 5.5; Procedures	
5.5.5.c	record of checks that equip complies with specification (see 5.5.2)		QM-II 5.5; Procedures	
5.5.5.d	Current location where appropriate		QM-II 5.5; Procedures	
5.5.5.e	Mfgs instructions if available or their location		QM-II 5.5; Procedures	
5.5.5.f	records of dates, results, and copies of reports and certificates of all calibration, adjustments, etc, and due date for next calibration		QM-II 5.5; Procedures	
5.5.5.g	Maintenance plan, where appropriate, and history		QM-II 5.5; Procedures	
5.5.5.h	records of damage, malfunction, modification or repair		QM-II 5.5; Procedures	
5.5.6	Procedures for handling, storage, and transport of equipment		QM-II 5.5; Procedures	
5.5.7	Equipment suspect for any reason shall be taken out of service and isolated and labeled until repaired. Possible impacts on previous tests shall be examined		Procedures	
5.5.8	Where possible equipment should be labeled with indicating status of calibration, date when last calibrated, and expiration date when re-cal is due		Procedures	

5.5.9	If equipment goes outside of lab's control it shall be checked and shown satisfactory before returned to service		Procedures	
5.5.10	Defined procedure for intermediate checks if needed		Procedures	
5.5.11	If calibration gives rise to correction factors, must have procedures to ensure that these are copied into all relevant locations (e.g. software)		Procedures	5.7
5.5.12	Test and cal equipment, including software, shall be safeguarded against adjustments which would cause invalid results		Procedures	5.5
5.6	Measurement Traceability	5.6 Measurement Traceability	Heading	
5.6.1	all equipment that has a significant effect on the accuracy or validity of a cal shall be calibrated before use. A program and procedure for these cals must be established and implemented		QM-II 5.6	5.5
5.6.2	Specific reqmnts for Traceability		QM-II 5.6	5.5
5.6.2.1	Calibration for traceability		Heading	
5.6.2.1.1	Calibrations traceable to the SI; external cal svcs must be able to demonstrate competence, measurement capability, and traceability.	5.4 Measurement Traceability	QM-I 5.6; QM-II 5.6	
5.6.2.1.2	Reqmnts for cals not traceable to SI, need for interlaboratory comparisons	NA?	NA	
5.6.2.2	Testing Labs	NA	NA	
5.6.2.2.1	Reqmnts for testing labs to be traceable to SI if such meas affect the test results	NA	NA	
5.6.2.2.2	If traceability to SI is not possible, but some traceability is necessary, then this section applies	NA	NA	
5.6.3	Reference Standards and Reference Materials		Heading	
5.6.3.1	Program for use and calibration of reference standards, exclusive use for the calibrations only		Procedures	
5.6.3.2	Reference matls should be traceable to the SI, if possible, or to certified Ref. Matls.		Procedures	
5.6.3.3	Procedures and schedules for required intermediate checks		Procedures	
5.6.3.4	Procedures: Handling, transport, storage of reference standards and reference matls.		Procedures	
5.7	Sampling	5.7 Sampling	Heading	
5.7.1	Sampling plan and procedures, available at location of sampling activity, based on appropriate statistical methods	NA	NA	
5.7.2	Records kept and included in cal results of deviations from sampling plan or procedures		NA	
5.7.3	Records required for sampling		NA	
5.8	Handling of Test and Calibration Items	5.8 Handling of Test and Calibration Items	Heading	
5.8.1	Procedures for transportation; receipt, handling, protection, storage, retention or disposal of cal items. Protect integrity of test and interests of lab and client		Procedures; G07	4.5
5.8.2	System for identifying cal items: confusion free!		Procedures; G07	
5.8.3	Procedures for receipt of item: recording abnormalities. Doubts with regard to suitability of item for cal should be checked with customer		Procedures; G07	

5.8.4	Procedures and facilities for handling and storage of test items such that they will not be degraded or lost or etc.		Procedures; G07	
5.9	Have quality control procedures and keep records thereof for assuring the validity of test and calibration results. Data from procedures should be analyzed for trends by statistical techniques	5.9 Quality Assurance Practices	Heading	
5.9.a	Quality control procedures may include: regular use of ref matls		Procedures	4.6
5.9.b	Quality control proc may include participation in interlaboratory comparisons and proficiency tests		Procedures; QM-II 5.9	
5.9.c	Quality control proc may include replicate cals using diff methods		Procedures	
5.9.d	Quality control proced may include recal of retained items		Procedures	
5.9.e	Quality control proced may include correlation of results for different characteristics of an item		Procedures	
5.10	Reporting the results	5.10 Reporting Results	Heading	
5.10.1	Clear, unambiguous, accurate, objective reports. Information normally required for cals is specified in 5.10.2 and 5.10.3 (5.10.4 for test)	5.10.1 Reports of Calibration and Special Tests	QM-II 5.10; Procedures	4.6
5.10.2.a	Report includes a title	5.10.1.1	Procedures	
5.10.2.b	Name, address, and location where cal was made	5.10.1.2	Procedures	
5.10.2.c	Reports shall contain: unique identifier	5.10.1.5 & 6	Procedures	
5.10.2.d	Reports shall contain: name and address of client	5.10.1.7	Procedures	
5.10.2.e	Reports shall contain: identification of method of cal	5.10.1.3 & 4	Procedures	
5.10.2.f	Reports shall contain: description of, the condition of, and unambiguous identification of cal item	5.10.1.8 & 9	Procedures	
5.10.2.g	Reports shall contain: date of receipt of item if this is critical to validity and the dates of performance of the tests	5.10.1.9	Procedures	
5.10.2.h	Reports shall contain: reference to the sampling plan	NA?	NA	
5.10.2.i	Reports shall contain: cal results and units of measurement	5.10.1.11	Procedures	
5.10.2.j	Reports shall contain: names, function, and signatures of persons authorizing cal report	5.10.1.15 & 5.10.2	Procedures	
5.10.2.k	Reports shall contain: where relevant a statement that the results relate only to the items calibrated	5.10.1.16	Procedures	
5.10.3	Test Reports	5.5 Reports of Calibrations and Tests	Heading	
5.10.3.1a	deviations from test method, including environmental conditions	5.10.1.4 & 13	NA	
5.10.3.1b	compliance/non-compliance with the test method	5.10.1.4	NA	
5.10.3.1c	statement of uncertainty	5.10.1.12	NA	
5.10.3.1d	opinions and interpretations	5.10.1.18	NA	
5.10.3.1e	additional information as required	NA	NA	
5.10.3.2a	date of sampling	NA	NA	
5.10.3.2b	id of substance or material sampled	NA	NA	
5.10.3.2c	location of sampling	NA	NA	
5.10.3.2d	sampling plan and procedures	NA	NA	
5.10.3.2e	environmental conditions during sampling	NA	NA	
5.10.4	Calibration Certificates	5.10.1	Heading	

5.10.4.1.a	In addition to reqmnts of 5.10.2, cal certificates shall include, where necessary for interpretation of results: conditions of test that influence the result	5.10.1.18	QM-II 5.10; Procedures	
5.10.4.1.b	In addition to reqmnts of 5.10.2, cal certificates shall include, where necessary for interpretation of results: the uncertainty of measurement with an identified metrological specification thereof	5.10.1.12	QM-II 5.10; Procedures	
5.10.4.1.c	In addition to reqmnts of 5.10.2, cal certificates shall include, where necessary for interpretation of results: evidence that the measurements are traceable (see note 2 of 5.6.2.1.1)	5.10.1.14	Procedures	
5.10.4.2	Cal certificates shall relate only to quantities and the results of functional tests. If a statement of compliance is made, the specific specifications which was met or not met shall be identified	NA - 4.2.1 NIST Quality Policy	NA Ref QM-I	
5.10.4.3	If instrument is adjusted or repaired, results before and after such action, if available, shall be reported		Procedures	
5.10.4.4	Cal certificates shall not contain recommendations on the cal interval except where this has been agreed by the client.	NA	NA	
5.10.5	Opinions and interpretations, if included, must be accompanied by documentation of their basis. Such opinions must be clearly identified as such in the report		QM-II 5.10; Procedures	
5.10.6	When calibrations are done by subcontractors, the lab doing the work shall issue the cal certificate to the contracting lab	NA -4.2.1 NIST Quality Policy	NA Ref QM-I	
5.10.7	Electronic transmission of cal results must meet reqmnts of this standard (also security 5.4.7)		QM-II 5.10	
5.10.8	Format of reports designed to accommodate type of cal and to minimize misunderstanding or misuse.		QM-I 5.10.1.18	
5.10.9	Amendments to reports must indicate that this is a supplement to the original report including the identifier thereof. Replacement test reports should indicate the original they replace		QM-II 5.10	